#### STEVE JORDAN'S COMMENTS ON DRAFT ENGINEERING EVALUATION/COST ANALYSIS REPORT

#### **EXECUTIVE SUMMARY**

- E 1.1 "non-time critical"; Who will define the time? Who decides if it is "critical"?
- E 1.2 "consistent with" 2 stated federal pieces of legislation; Has anyone checked to make sure that these statutes have actually been followed and that no other federal statutes apply?
- E 2.1 The wording of this section is interesting. It says the Army "will sign" an action memo selecting the most appropriate removal action in the EE/CA. It says the memo "will summarize public acceptance of the recommended alternative". First, this means the Army is saying ONLY the alternatives in the EE/CA will be considered irrespective of what might be brought up during the 30-day comment period. Second, it is saying the public will accept the recommended procedure, before the public has even been told what that procedure will be. Whoever wrote this is admitting that the deck is stacked in favor of public acceptance despite the comment period.
- "...the recommended alternative **may** be modified" Again, whoever wrote this is saying that while a comment period is mandated by law the Army doesn't have to pay attention to anything submitted during that period. That is legally true, but it is horrible politics to admit it. Their invitation for community comments is clearly being done only to satisfy statutory requirements. The Army is showing no intention of seriously considering anything brought up by those comments.
- E 4.2 This talks about the delineation of M-2. It's part of a "much larger undocumented training area". Logic would dictate that the Army has no earthly idea how big the training area(s) for OE happens to be or where that (those) region(s) is (are) located. Since that is the case, the boundary lines of M-2 must have been drawn in some arbitrary fashion. The Army cannot say that even if the interior of M-2 is swept 100% clean of OE a person would be safe if they took one step outside the M-2 area. So, how does the Army intend to deal with people who cross the invisible line of the boundary of M-2?

"Although most of the items have small explosive hazards." What is small? Large enough to blow off a foot, but not a tire?

E 5.1 How is it that in a world of infinite possibilities only these 4 were chosen for initial evaluation? What criteria were used in creating these alternatives?

The list of how the alternatives are to be evaluated is interesting because "cost" is put last. This is good politics, but it would be interesting for the Army to have to admit that "cost" is not required to be considered last. In fact, the statutes may require it to be

considered much further up the list. In the Army's view, how big a role did "cost" really play in determining their alternatives?

E 5.2 Again, are these objectives really listed in order of importance? Who decides "to the extent practicable"?

It is curious that out of only 4 initial alternatives 2 are eliminated immediately. They must have known this going into the process. Therefore, they are, and have been, considering only 2 real alternatives.

If the removal process is admittedly not guaranteed to be 100% effective, why is it that post removal action risk management activities and long-term monitoring "may" be required? Why won't it definitely be required and who will pay for it?

E 5.3 It sounds like the Army intends to use the same alternative chosen by this EE/CA for the Eastern Bypass; however, it will create a new EE/CA for the Redevelopment Area. Isn't this a tacit admission that this EE/CA is flawed? Why would they have to come up with a new one later?

#### SECTION 1

- 1.1.4 This section is just mistitled. It should be called soils. This all appears to be taken directly from the Calhoun County Soil Survey. It contains no definitive information about the water table or the underlying bedrock. Water problems are probably not a big concern versus being blown up. Any large-scale disturbance of the soils will produce a different through flow of water......meaning the water that runs down hill is currently doing so through the soil rather than down to a regional water table and then moving. This would probably only effect subsequent construction and drainage. It just means the drainage plans for M-2 should not be drawn up until the removal work has been completed. Make of that what you will.
- 1.2 "...the site..." As used in the first sentence it is unclear if the authors are referring to Fort McClellan or M-2.
- 1.3 This is very interesting particularly how it applies to future OE removal actions. The ASR was "finalized in July 1999." The ASR showed "no indication of OE training...within the boundaries of M2 parcel."

Investigations related to the Eastern Bypass, gone over in the rest of 1.3, subsequently revealed the presence of OE in areas "adjacent" to M-2 and "near" M-2. "Potential sample locations" are identified in 1.3.5 as being in areas that "adjoin and overlap the M2 parcel."

Ignore M-2 for a moment. The ASR is obviously inaccurate. The only reason the OE were discovered was the subsequent investigation for the Eastern Bypass. No Eastern

Bypass and the Army would have relied upon the ASR. What do they plan to do for the areas of the Fort outside the Eastern Bypass right of way? I'd argue that the ASR is insufficient on its face with respect to OE. All that is needed is for 1 piece of OE to be discovered within the boundaries of M-2 and you can argue the ASR is fatally flawed and should not be relied upon for any further use related to locating OE. I don't know if this is what you want to do, but I think it is obvious and will be so to the opponents of any clean up actions.

1.3.9 What does this mean? Does it mean that EODT (By the way, what the hell is EODT? It isn't in the acronym list.) is stripping off the top 12 inches of everything along the right of way? Does it mean EODT is doing a search and removal action for OE within a depth of one foot? If so, what method are they using?

Note that more instances of OE are found "adjoining" M-2. I'd say it's a good bet that the credibility of the ASR will be blown by the discovery of an OE in M-2.

- 1.4 'able Note that an incendiary device was found within 100' of M-2.
- 1.4.1 It "is suspected" that items used in the M-2 area "may contain a small explosive charge as well as incendiary material that could still function". This again calls into question the Army's reliance on the ASR.

The assumption that OE devices would be found at depths less than one foot is highly dependent upon the specific site because of variations in burial rates due to erosion and organic accumulation in different geomorphologic environments.

5 The Risk Analysis and Assessment is in Appendix D, not Appendix B.

"The risk analysis indicates a non-time critical removal action is warranted." I did not notice the phrase "non-time critical" in the risk analysis section, Appendix D.

The risk analysis is not a traditional one where all possible alternatives are reviewed in a rigorous fashion. It reads like it was written after Alternative 4 was chosen in an attempt to make the analysis fit the choice already made rather than have an analysis help to make the choice. I would be interested in knowing what came first.

#### SECTION 2

2.1 A lot of subjective terms are used here....."realistic", "achievable", "implementability" and "economical". Who decides what these terms will mean?

Also, again there is a list of items to be considered with "cost" at the end. Is there a mandate to use "cost" as the last arbiter of choices or may "cost" be considered first?

- 2.2 I question whether the list of objectives is in their true order of importance and the true order in which they were considered. Use of the word "ensure" is incorrect, as the authors admit in the E.5.2 that the detection and removal action may not be 100% successful.
- 2.3.2 "The intent...dispose of **all**...OE within the M2 parcel." That may be their intent, but they admit in E.5.2 that total detection and removal may not be possible. I believe it should also be mentioned here. Their intention cannot be met.

How would "OE clearance" be provided?

What would the follow-on remedial actions be? What would trigger them? Who would pay for them?

"In the event that actual removal of OE is required:" When would it not be required? I assume if any OE are found they will be removed.

2.4 I'm curious about how the 4-6 week time frame was determined and what would hinder it or accelerate it?

It says "three factors are applied". only two are listed.

- 2.5.2 through 2.5.9 Who makes the final decision about all these "relevant and appropriate" items?
- 2.6 "The M2 Parcel will be transferred......" It's hard to take all of this seriously when they admit the transfer will happen despite what may be found there, or more appropriately, what remains there that they don't find. I hope they don't miss something deadly. By the way, say they do miss something....the land is transferred.....a kid gets a foot blown off..... who is liable?

#### **SECTION 3**

- 3.2.3 "The selection of the best technology depends on the properties of the OE to be located......" If the selection of the technology depends on already knowing where the OE is located, why are you selecting a technology in the first place?
- 3.3.5 "...at depths at which it is anticipated to be encountered" Remember, E.5.2 commits them to removal regardless of depth. So, would they only look to depths where they suspect OE presence?

same as above

3.4 (ALL Subsections) The effectiveness categories are discussed without ever mentioning that the methods available are not 100% guaranteed to detect all OE.

The acceptance sections all simply assume everybody will accept the army's wisdom.

Cost is again listed last. I'd like the Army on record stating just exactly where cost comes into play.

#### **SECTION 4**

- 4.1 Risk analysis is Appendix D.
- 4.5 Reread 4.4....The Army will do what the Army wants and deems necessary in the opinion of the Army. Don't let the use of the word "assurances" sway you.

In general, this document appears to be written in a way that will justify a pre-determined conclusion rather than to explain the decision making process.

I think the single most important item in the report is the revelation that without the extra exploration required by the route of the eastern by-pass the OE within M2 would remain undetected. The report also admits there are large undocumented areas on the Fort where OE could be found. So, the question becomes what is the Army planning to do with this large undocumented area? There could be OE anywhere on the Fort grounds.

## Response to comments on Draft M2 Parcel EE/CA from Mr. Steve Jordan, JSU

- E1.1 The nature of contamination, the urgency/threat of release, and timeframe required for initiating a removal action determines the type of removal action which may be either an emergency, time critical, or non-time critical removal action. An Emergency Removal Action is used to address immediate, unacceptable hazards. A Time Critical Removal Action (TRCA) is conducted in response to an imminent danger posed by a release or threat of a release, where actions must be taken within 6 months to reduce risk to public health or the environment. A TCRA is intended to address only the imminent safety hazard posed by OE, not the cleanup requirements that can be deferred for later action under a Non-Time Critical Removal Action (NTCRA). A NTCRA has several formal steps that must be followed, in which public participation is an integral component.
- E1.2 Additional explanation has been added to show the applicability of the referenced statues. On OE Response Actions there are other requirements that must be followed that were referenced in Section 2.5. However, I have added these references to the Executive Summary for clarification. Both EPA and ADEM have reviewed this document.
- E2.1 The EECA is still draft until public comments have been received and addressed. This means that the alternatives in the EECA may be changed or re-evaluated based upon public comments. If a different alternative is selected or recommended for evaluation due to public comments, the EECA would be revised to incorporate these changes prior to being finalized. The Action Memorandum will select the most appropriate removal action in the Final EECA. The text has been clarified.
- E4.2 The M2 Parcel boundary lines delineate the area that was requested for fast-tracking for transfer. Initially the M2 Parcel would have been included in the EECA for the Redevelopment Area at Fort McClellan. However, due to the timeframe proposed for transfer, a separate EECA has been conducted to meet the transfer schedule. The rest of the training area will be addressed in the Redevelopment EECA with the exception of the portion that is contained in the proposed route of the Eastern Bypass. The EECA for the proposed Eastern Bypass is currently available for public comment. The quantities of potential explosives in individual items is identified in

- Table 1.1. The explosive hazard from these items is primarily from someone activating an item in close proximity to there head. Some items also contain incendiary material which could cause burns.
- E5.1 These alternatives were selected because they have proven to be effective at other sites. Also, each of these alternatives (except No Action) can be tailored to fit the specific site. For instance, there are several variations on land use controls, different controls being more effective on different sites. The initial design of these alternatives is done using the data gathered during the EE/CA process. However, if you feel different alternatives would be more effective, please share these ideas with us. Public response to the removal alternatives is a modifying criteria in final selection of the alternative. At this point, this is simply a recommended alternative. Also a detailed evaluation of each alternative identifying the scoring criteria has been added for clarification in section 3.0.
- E5.2 A detailed evaluation of each alternative identifying the scoring criteria has been added for clarification in section 3.0. Discussion on what is meant by practicable has been added to section 2.2.
- E5.3 The M2 Parcel is a relatively easy site to characterize. However, each OE site is different. Throughout the Redevelopment Area exist several different sites with different levels and types of OE. It is important to define the nature and extent of the OE in order to determine if it is economically and technically feasible to conduct a physical clearance of an area. Whenever possible the Army prefers to use a permanent solution that eliminates the hazards from a site. However, when that is not possible, other controls must be implemented to protect the public. Sometimes limited removals are combined with land-use controls to permit certain uses of the site.
- 1.1.4 Additional information on the M2 Parcel has been added to Para. 1.1.3. The titles of these paragraphs have been deleted so as not to be misleading. They are all included under site description. The proposed removal action should not create any large scale disturbance of the soils. All holes will be immediately backfilled. When necessary, areas will be reseeded to protect form erosion.

- 1.2 The text has been revised in this section for clarification. Paragraph 1.2 is general background on Fort McClellan. Paragraph 1.2.1 has been added to discuss specifics on the M2 Parcel.
- 1.3 The ASR is a compilation of available historical information on the use and training in regards to OE. The ASR is a starting point for identifying all areas historical information indicates possible presence of OE. The ASR is not used exclusively to identify areas of potential contamination. For the Eastern Bypass, a detailed analysis of historical photographs was conducted, followed by ground reconnaissance, geophysical investigations, and finally intrusive sampling. It was this process that identified the undocumented training area in the vicinity of Summerall Gate. However, it was the ASR that identified the impact area near Iron Mountain which consisted of numerous ranges in different configurations over time. These tools/processes must be used together to be effective.
- 1.3.9 Additional text has been added to this section for clarification. Again, the ASR is simply a compilation of historical information. It is extremely valuable to the OE cleanup process but is not relied upon exclusively. Other tools are used to identify undocumented training areas.
- 1.4 Comment noted. Figure 4 has been revised to reflect the locations of all OE training items found to-date in the vicinity of the M2 Parcel.
- 1.4.1 The reviewer is correct in that accumulation of organic matter and erosion are factors in the potential depths of OE items. However, these factors were considered in estimating potential depth of these items to be less than a foot unless buried. The calculated penetration depth of all items has been added to Table 1.1. Also figure 4 has been revised to indicate depths that all items to-date have been located which were all less than a foot with the exception of a burial pit which was 12 inches.
- 1.5 This section has been rewritten for clarity. All discussion on risk was removed from Appendix D and placed into the text of the document.
- 2.1 Section 3 has been rewritten to provide clarifying detail on what evaluation factors were used and how they were weighted in the evaluation including how cost was used in the evaluation.
- 2.2 See response to comment on 2.1. The term "removal action

- 2.3.2 OE clearance refers to the physical removal of OE. The term "removal action" refers to the entire removal alternative which in this case includes land use controls. The Army is responsible for conducting reoccurring reviews to ensure the removal action was effective and that site conditions haven't changed in such a way that another remedial action is required "...OE removal is required" has been deleted from the text.
- 2.4 The 4 to 6 week time frame was based upon current production rates for brush clearing, surveying, geophysical mapping, and OE removal that have been achieved at Fort McClellan in similar terrain and under similar conditions. Things that could accelerate or hinder this assumption would be encountering a lower or higher density of OE than expected. Also encountering OE containing high explosives or chemical agent could significantly impact the proposed schedule. However, this is not anticipated.

#### 2.5.2 The text has been corrected

#### Section 3

- 3.2.3 Several factors may impact the effectiveness of different technologies. Some include size of item, potential depth of item, and material from which item is composed. Also, some technologies are more effective than others in discriminating between geological conditions (hot rocks) and OE items. Soil types and terrain also play a part in selecting the most suitable technology. All of these factors shall be considered
- 3.3.5 Removal to depth means that any potential OE item would be removed regardless of depth. The technology does not decide what depths to look at. Its limitations on how deep of an item it can see is dependent on the physical properties of the item (size, shape, mass, material). Although the particular items that are expected within the M2 parcel are estimated to be within the upper foot unless buried, the term clearance to depth, means that anomalies deeper than we expect to locate OE would also be investigated.
- 3.3.6 See response to comment on paragraph 3.3.5.
- 3.4 This section has been rewritten to provide show detailed analysis of each alternative and the weighting of the factors

- 4.1 Appendix D (Risk Analysis) has been replaced with Reconnaissance Memorandum and SI Field Notes. The discussion on risk has been revised and moved into section 1.5 of the document.
- 4.5 Additional discussion has been added to the document to clarify the evaluation process. Due to the nature and duration of training that took place at FMC, you are correct that an OE item might turn up anywhere. A finding of Suitability to Transfer is required for any property transferred by the Army. This will require us to evaluate each area prior to transfer.

March 31, 2000

Ronald M. Levy BRAC Environmental Coordinator Environmental Office, Bldg 215, 15th Street US Army Garrison Fort McClellan, Alabama 36205-5000

#### ADEM's Comments on the Draft EE/CA for the M2 Parcel at Fort McClellan, Alabama

Dear Mr. Levy

The Alabama Department of Environmental Management has received and reviewed the *Draft EE/CA for the M2 Parcel*, Fort McClellan, AL. We have enclosed our comments for your review and written response. The Department expects a written response to all of the enclosed comments one week prior to the scheduled BCT Meeting on April 25-26, 2000.

For any questions or concerns please contact me at 334-271-7789 or cli@adem.state.al.us

Sincerely,

Christopher L. Johnson Governmental Facilities Section Hazardous Waste Branch Land Division

CLJ/

Enclosure

cc: Bart Reedy, EPA Region 4, w/ enclosure David Skridulis, USACE-HNT, w/ enclosure Ellis Pope, USACE-MOB, w/ enclosure



#### **General Comments**

The title of this document should be revised to reflect the content of which it contains. Is this a report or a workplan? In addition, the submittal should clarify how an EE/CA is utilized in the overall removal process, assuming the Army is indeed following the Non-Time Critical Removal Action Process as defined by the NCP. See Exhibit 1 for details. Please clarify.

Response: Title of Document has been clarified.

2. The term Institutional Controls is used extensively throughout the document. The BCT has agreed to use the term Land Use Controls as the overarching term used to describe both Engineering Controls and Institutional Controls. Please refer to the Draft-Final Land Use Control Assurance Plan Memorandum of Agreement (LUCAP MOA-March 2000) for specific details. Please revise all language throughout the EE/CA in a manner that is consistent with the LUCAP MOA.

**Response:** Reference to institutional controls has been deleted and replaced with language consistent with the proposed LUCAP MOA.

3. The Department has a hard time understanding how the Army continues to claim that OE removal actions are being conducted "consistent" with CERCLA and the NCP. If the Army wishes to continue to stand on their "consistency" claim, then the Army must be willing and ready to receive and respond to the numerous comments that are generated by the regulators due to such claim.

#### Response: Comment noted.

4. The Army should provide the specific CERCLA statutes and NCP regulations that the EE/CA is being conducted consistent with or pursuant to. Simply stating that the EE/CA is being conducted consistent with CERCLA and the NCP is not meaningful. For example, what statutory authority under CERCLA is the Army using to conduct this removal action? What NCP regulations guide the EE/CA process? What NCP regulations warrant/justify the recommended removal action be taken? Please revise the submittal in a manner that specifically cites CERCLA statutes and NCP regulations.

Response: Specific references have been added in para. E.1.2.

The Department questions how the Army can justify a removal action for a site without first determining the nature and extent of contamination and then based on such data, determine the risk posed by the site. In the Army's letter dated March 24, 2000 (2<sup>nd</sup> paragraph) you state the "primary purpose of the EE/CA is to characterize the nature and extent of ordnance. In addition, the EE/CA examines a variety of risk management alternatives," It appears we agree on this matter, therefore please explain how the Army justifies a removal action without first characterizing the site and determining the risk posed by the site.

**Response:** Figure 4 has been added to to document for clarification on how the nature and extent was assumed. Section 1.4 has also been revised for clarification.

6. The Department does not agree that this EE/CA has been prepared consistent with the NCP and CERCLA. Major inconsistencies are as follows: 1) an EE/CA Approval Memorandum was not prepared prior to initiation of the EE/CA, 2) the goals and scope of the EE/CA were not clearly identified, 4) nature and extent of contamination was not defined, 5) the risk assessment/analysis process is 3) the methods used to conduct the initial and detailed screening evaluation are flawed. For example, is this the first and only action necessary to protect human health and the environment or is this one of several actions to be taken at the site? If no other actions are intended, then the role of the EE/CA is to provide definitive information on the source, nature and extent of contamination and risks presented by the site. The scope of the removal action plays a very important role in determining the content of the EE/CA. ADEM highly recommends revisiting the NCP and EPA's Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA (EPA/540-R-93-057, August 1993) for clarification on the role and purpose of conducting EE/CAs. Please revise all sections throughout the report accordingly.

**Response:** Funding approval for the EECA serves as the EE/CA Approval Memorandum for the Army. CEHNC was authorized to use funding for this effort prior to initiation of the EECA. The document has been significantly revised to correct any inconsistencies that were previously identified.

7. Does the Army consider this to be an emergency, critical, or non-time critical removal action? It is important to clarify this throughout the report because the NCP has different requirements depending on the type of removal action being considered. Based on the timeframes and scope of the proposed removal action, the Department considers this to be a Non-Time Critical Removal Action. Please clarify.

Response: Text has been clarified to state that the removal action is a non-time critical removal action.

8. The Army's removal action goals are extremely vague. The EE/CA Report does not clearly provide the understanding of the level of protectiveness the action will provide. The following questions immediately surface: Will the removal action be protective of both the commercial and residential scenarios? Is this action considered to be the final remedy for Parcel M2? Are land use controls being proposed for the recommended action? Does the Army intend to implement a Land Use Control Implementation Plan (LUCIP) for Parcel M2? According to the scope of the removal action all OE will be removed from the surface and subsurface of Parcel M2. However, the use of "Institutional Controls" is mentioned several times throughout the report. If "ICs" are intended then the Army must provide detailed reasons as to why ICs are necessary when "all OE will be removed". Please clarify these issues.

**Response:** Clarifying text has been added.

9. Figures should be included in the EE/CA Report to support and clarify the various sections of the submittal.

**Response:** Figure E-1, Fig. 4, and Appendix C have been added too support and clarify the report. Also Tables

10. The terms OE, UXO, and CWM should be defined within the EE/CA for clarification to the reader.

Response: Definitions have been added for clarification.

#### Specific Comments

#/Page/Section Comment

1/ES/E.1.1

The first sentence states "the Army proposes a removal action to reduce the risk of exposure to ordnance and explosives at Parcel M2". The Department questions how and when a risk assessment was conducted for Parcel M2? In other words, what risk level triggered the decision for the removal and how was the risk level determined? What data was used to evaluate the risk?

Response: A risk assessment has been provided as part of this EECA documentation. In accordance with "Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA", para. 2.1, the EE/CA "should contain only those data necessary to support the selection of a response alternative, and rely upon existing documentation whenever possible." There was a significant amount of data available from other investigations that identified a risk from the presence of OE on the M2 Parcel. This information clearly defined the nature and extent of OE, the associated risk, and associated costs for conducting a removal action. No additional data was necessary for selecting a preliminary response alternative. The additional information necessary to select the response alternative is feedback on regulatory and public acceptance of the recommended alternative.

2/ES/E.2.

The title of this section is incorrect. Community Participation is required of the Army according to the NCP, not requested. ADEM recommends deleting the term "REQUESTED" from the heading. Secondly, the Department questions which version (draft or final) of the EE/CA the Army intends to offer the public a 30-day review? Secondly, how does the Army intend to advertise the EE/CA for public review?

**Response:** The Army is "required" to "request" community involvement. We cannot require their involvement. If the community chooses not to participate or respond to our request, we have no way of forcing their participation. Title of this section has been revised to "Community Involvement".

3/ES/E.3. A figure should be associated with this section for clarification to the reader.

Respone: A figure has been added for clarification.

4/ES/E.4.

This section discusses general history of Fort McClellan, not Parcel M2. The history of Parcel M2 should be provided in detail. For example, what activities occurred at M2? What OE items were used at M2? What were the dates of training/operation?

Response: The available information on the history of the M2 Parcel has been added for clarification.

5/ES/E.5. 1st bullet: Please define the term "No DoD Action Indicated". ADEM is not familiar with this term. The appropriate term to be used is "No Action".

Response: : Text has been revised to "No Action'

2<sup>nd</sup> bullet: Delete "Institutional Controls" and replace with "Land-Use Controls".

**Response:** Reference to institutional controls has been deleted and replaced with language consistent with the proposed LUCAP MOA.

6/ES/E.5 2nd paragraph: The manner and content in which the criteria are presented does not accurately represent the nine criteria as defined according to Section 300.430 of the NCP. As you should be aware, when removal actions are conducted to serve as the "final remedy" for sites, then the scope of the removal takes on a whole new meaning, not unlike that of a remedial action. Therefore, each alternative must be evaluated against the nine criteria, not just the general categories of effectiveness, implementability and cost. The nine criteria as defined by Section 300.430 of the NCP has been provided below for your use and incorporation into the Final EE/CA.

#### Threshold Criteria:

- 1. Overall Protection of Human Health and the Environment
- 2. Compliance with ARARs

Primary Balancing Criteria:

- 3. Long-Term Effectiveness and Permanence
- 4. Reduction in Toxicity, Mobility, and Volume through Treatment
- 5. Short-Term Effectiveness
- 6. Implementability
- 7. Cost

Modifying Criteria

- 8. Regulatory Acceptance
- 9. Community Acceptance

**Response:** Document has been revised to use the nine criteria. Section 3 has been completely rewritten to provide a detailed analysis of the alternatives using thes criteria.

7/ES/E.5.

Analysis and Recommendation Action Section: 1st paragraph mentions the removal action objectives. ADEM believes it would seem prudent to discuss the removal action objectives in the Executive Summary rather than referring the reader to Section 2.

Response: Additional text has been added to the Executive Summary, para E.5.1

Secondly, the 3<sup>rd</sup> sentence of the 1<sup>st</sup> paragraph states that "Alternative 2 (Institutional Controls) be evaluated as part of the overall risk management of Fort McClellan." The Department questions this statement in regards to its applicability to the recommended action, namely Alternative 4. If the recommended action is clearance of all potential or known OE, regardless of depth, then why would Institutional Controls or Land Use Controls (LUCs) be necessary for Parcel M2? On the other hand, if the Army is envisioning the use of LUCs with Alternative 4, then such LUCs must be defined and included as part of Alternative 4. When evaluating alternatives against the nine criteria one doesn't couple alternatives together (i.e. Alternative 2 and 4). Please clarify.

Response: Alternative 4 has been revised to discuss LUCs as part of the recommended alternative.

8/i/TOC The LIST OF FIGURES is on page iii not ii. Please revise.

Response: Revision has been made.

9/i/TOC

The ACRONYMS AND ABBREVIATION is on page iv not iii. Please revise.

Response: Revision has been made.

10/i/TOC

The page numbers provided in the Table of Contents is incorrect for all sections of the document. Please revise.

Response: Revision has been made.

11/Figure 2

Figure does not accurately depict the boundary of Parcel M2. According to FTMC staff and ADEM site visits, the eastern boundary of the site extends eastward and abuts against the unimproved road. Please revise Figure 2 to accurately reflect the size, topography, streams, roads, etc. of Parcel M2. The figure should also include a legend and be drawn to scale.

**Response:** The location of the M2 Parcel has been corrected. The purpose of figure 2 is not to show specific details for the M2 Parcel but to show its location in respect to Fort McClellan. Due to the scale of this drawing, it would not be practical to add more detail. A more detailed figure has been added to the Executive Summary to show more specific detail for the site.

12/7/1.3.2 Last sentence of paragraph. Delete "material" and replace with "materiel".

Response: Text has been correct.

13/7/1.3.3

The information provided in this section is dated. The Environmental Assessment was finalized and signed on August 29, 1998. A Finding of No Significant Impact was finalized and signed on December 2, 1999. Please revise.

Response: Revision has been made.

14/8/1.3.6

According to Appendix C, the geophysical anomalies depicted in Area 6 are a result of a geophysical proveout. The anomalies depicted in the geophysical surveys are shown to be the result of seeded items. Please explain.

**Response:** The legends for some of the figures were reversed (i.e., proveout was labeled survey and survey was labeled proveout) in the original document, "Draft Eastern Bypass EE/CA at Fort McClellan," July 1999. These figures have been corrected in both documents.

15/8/1.3.7

2<sup>nd</sup> sentence states that "several OE items used for training were found in sampling grids near the M2 Parcel." The Department would like more specific information regarding the location, number and type of OE items found in relationship to Parcel M2. In addition, a figure and description of all the OE items found "in and around" Parcel M2 would be very informative. Please revise.

**Response:** Figure 4 has been added showing this detail. Also, an appendix with figures of each type of item has been added.

The resources used to provide the data for Table 2 should be specifically cited in this section or in Table 1.2.

Response: The resources have been referenced on Figure 4.

This section is absolutely uninformative. There is nothing in this section or Appendix B that either quantitatively or qualitatively describes the risks posed by Ordnance and Explosives (OE) at Parcel M2. At minimum, risk assessments should serve the following purposes: 1) Characterize the risk posed by OE. 2) Document the need for a removal/remedial action. 3) Serve as the primary tool for calculating cleanup levels. 4) Evaluate risk after a removal action has been completed (i.e. post-removal risk evaluation). 5) Guide the decision maker as to the level of Land Use Controls necessary for a site, pre or post remedy. 6) Provide a basis for determining levels of OE that can remain on-site and still be protective of public health. The Department feels that if the Army's risk assessment process for OE cannot achieve the above, then no value is added to the process by conducting a risk assessment. If the Army claims that their risk assessment process is consistent with the NCP, then ADEM suggest the Army re-visit the NCP as well as the numerous EPA Guidance documents that specifically discuss the role of the Risk Assessment (RA) in the Superfund Process.

**Response:** All discussion on risk has been removed from Appendix D. This section has been rewritten to shwo how the initial risk was identified and what triggered a NTCRA. Discussion on residual risk has been added to Section 4.

Top of page. See specific comment No. 6. Alternatives must be evaluated against the nine criteria according to the Section 300.430 of the NCP. Effectiveness, Implementability, and Cost are only 3 of the nine criteria. In addition, each alternative must meet the two threshold criteria, namely 1) protect human health and the environment and 2) attain ARARs. This section should be revised to accurately reflect the NCP's requirements for evaluating alternatives against the nine criteria.

Response: The document has been revised. All alternatives have been evaluated using the nine criteria.

19/11/2.2 1st bullet: The first bullet speaks more to worker safety during the actual removal.

ADEM feels the primary goal of any removal action is to protect human health and the environment. ADEM agrees that the actual removal action should be protective of workers and the public during implementation however it should be stated as a separate goal.

**Response:** Public safety as much of a concern as worker safety during the removal action. An additional bullet has been added for clarification: *Ensure overall protectiveness of the public after completion of the removal action* 

2<sup>nd</sup> bullet: Delete the term "possible" and replace with "practicable".

**Response:** Text has been revised.

3rd bullet: This goal is vague. ADEM believes the appropriate language should be as follows: "The removal action should allow for the intended future use of the property. However, one goal of the BCT is to cleanup property to unrestricted use whenever practicable, regardless of the intended reuse. This allows for unnecessary LUCs being place on property, as well as fewer burdens on all stakeholders, especially the public. If the goal for Parcel M2 is to cleanup to unrestricted use (i.e. residential use) then that should be stated as a goal. Please revise.

Response: Bullet was revised. Behavior modification is part of the risk management envisioned for this property. Although the removal action could possibly remove all OE from the property, there is no 100% guarantee of this. However, if behavior modification is coupled with the removal action, risk management for this property could be very effective. Specifically, if site workers are made aware of the possibility of encountering OE and the proper response if any suspect item is encountered, risk of a possible accident is significantly minimized.

20/11/2.3.2 2nd bullet: Delete the term "risk reduction" and replace with "the removal action".

Response: Text has been revised.

4<sup>th</sup> bullet: This requirement is confusing. It is our understanding that the Site Investigation (SI) for hazardous substances (i.e. other constituents) will be conducted prior to the OE removal action. Please explain.

**Response:** SI for hazardous substances (i.e. other constituents) is currently being concducted. Text was revised to remedial actions. It is unknown at this time if follow-on remedial actions will be required.

3rd bullet: The Department requires that the post-removal action activities should include a Quality Assurance sampling process that will certify that the removal action met its intended objective (i.e. was a success). Not unlike any other removal action, the Army must demonstrate effectiveness of the removal action after the removal has been completed. If the removal action did not remove all of the OE items, the post-removal sampling provides the data necessary for the BCT to decide the appropriate action to take, namely conduct a second removal or conduct a post-risk assessment in order to provide the public with the risk posed by the residual OE. The QA/QC sampling process for OE would parallel the QA/QC process used for HTRW removals conducted under CERCLA. Please revise this section accordingly.

Response: The quality control plan for OE activities will be included in the site-wide and site-specific work plans. CEHNC can provide a copy of our Quality Assurance Plan for OE activities upon request.

22/12/2.5. End of first sentence of paragraph. Delete the term "remedial action" and replace with "CERCLA".

Response: Text has been revised.

Same paragraph, last sentence. After the term "applicable to" please insert the phrase "hazardous substance, pollutant, or contaminant, to include ordnance". In addition, delete the term "remedial action" and replace with "CERCLA".

**Response:** Text has been revised to "ordnance, or maybe to hazardous substances, pollutants, or contaminants". "Remedial action" has been relpaced with "CERCLA".

23/12/2.5.2 1st sentence is incorrect. Although it may be USACE policy to attain ARARs to the extent practicable for OE removal actions, it is also a requirement of Section 300.415 of the NCP. Section 300.415(j) states that "In determining whether compliance with ARARs is practicable, the lead agency may consider the following factors, including: (1) The urgency of the situation; and (2) The scope of the removal action to be conducted." The third factor (statutory limits,) was in the Proposed Rule, however, was stricken by EPA from the Final Rule. Secondly, statutory limits for time and cost do not apply to non fund-financed removals. Please revise this section in accordance with the NCP.

Secondly, ADEM has reviewed both the urgency and scope of the recommended removal action, and have determined that all ARARs that have or will be identified must be attained. According to the contents of the subject EE/CA, we believe this is not an emergency removal nor is it a time-critical removal, therefore the urgency of the recommended removal action is negligible. Furthermore, the scope of the removal action as defined in the EE/CA demonstrates that the removal action will serve as the final remedy for Parcel M2. As per the preamble of Section 300.415 of the NCP, when determining the extent to which ARARs must be attained, the key component to consider is the purpose of the removal action. When the removal action objective has been defined to serve as the final remedy (Table 3.1, Alternative 4, Long-Term Effectiveness Criteria), then the scope of the removal action is not unlike that of a remedial action, therefore full compliance of ARARs is required. Please revise.

**Response:** It is anticipated that the removal action could serve as the final remedy for this site. However, if at any time in the future there is an indication that a risidual OE hazard remains at the site, additional remedial alternatives may be required. In addition, see attached letter dated March 24, 2000 regarding attainment of ARARs.

24/13/2.5.2 Top of page, 3<sup>rd</sup> bullet. Same as previous comment. Statutory limits for response action duration and cost do not apply to non-fund financed removal actions. Please delete this bullet.

Response: Text has been revised.

25/13/2.5.4 2nd sentence. Delete the term "numerical values" and replace with "standards".

**Response:** Text has been revised.

26/13/2.5.5 Last sentence refers the reader to Table 2.2. Table 2.2 does not exist. Please revise.

Response: Reference to Table 2.2 has been deleted.

27/14/2.5.6 Please include the following as potential State ARARs: Alabama Hazardous Waste Management and Minimization Act, ALA. CODE 22-30-1 et seq., Alabama Safe Drinking Water Act, ALA CODE 22-31-1 et seq., Alabama Water Pollution Control

Act, 22-23-1 et seq., and the Alabama Solid Waste Disposal Act, 22-27-1 et seq. In addition, ADEM considers DOD 6055.9 as a Chemical Specific ARAR. Please revise.

**Response:** Potential ARARs have been added. Also, DoD 6055.9 has been stated as a requirement which we will follow.

28/14/2.5.7 Same as previous comment. Please include the State ARARs.

Response: See response to comment 27.

29/14/2.5.8 Same as Specific Comment No. 27. Include State ARARs and DOD 6055.9 as potential Action-Specific ARARs.

Response: See response to comment 27.

30/15/3.2. 1st sentence. Delete the term "NDAI" and replace with "No Action"

Response: Text has been revised.

31/17/3.3 1st bullet: Same as specific comment No. 5. The term No DOD Action Indicated should be specifically defined. Currently, ADEM is not familiar with this term or its

meaning. According to CERCLA and the NCP, the term "No Action" is used and has specific regulatory meaning regarding removal/remedial action alternatives. Please

clarify.

Response: : See response to comment 30.

32/17/3.3. 2<sup>nd</sup> bullet: See general comment No. 2

**Response:** Reference to institutional controls has been deleted and replaced with language consistent with the proposed LUCAP MOA.

33/18/3.3.2 Same as previous comment.

**Response:** Reference to institutional controls has been deleted and replaced with language consistent with the proposed LUCAP MOA.

34/18/3.3.4 ADEM will reserve comments on the types of technologies being considered for Alternative 4. Specific comments and concerns will be forthcoming upon our review

of the Removal Action Work Plans and Site-Safety Submission.

Response: Comment noted.

35/19/3.4 Refer to Specific Comment No. 6. Please revise all of Section 3.4 in a manner that is

"consistent" with the NCP for evaluating alternatives.

Response: Document has been revised to be consistent with the NCP.

1st paragraph, 2nd sentence. Please validate this sentence by providing detailed rationale as to how the Army will certify that this Alternative will be protective of human health and the environment and demonstrate that all OE, regardless of depth, has been successfully removed.

**Response:** Although QA/QC will be performed to ensure the effectiveness of the removal action, the Army nor anyone else can demonstrate with complete confidence that all OE regardless of depth has been successfully removed.

37/25/4.3

What ongoing RI/FS and ROD are you referring too? ADEM is not aware of any ongoing RI/FS or ROD for Parcel M2. Based on the findings of the submittal, it is our understanding that the subject EE/CA is serving as the RI/FS and ROD for Parcel M2. Does USACE-HNT intend to conduct both EE/CAs and RI/FSs on every range at Fort McClellan? Furthermore, the EE/CA as presented by the Army to ADEM and EPA, is serving not only as a removal action to mitigate risk, but also as the final remedy for this site. Please clarify.

Response: Text referring to an RI/FS was accidentally pasted into document text and has been deleted. There is no intent to conduct both EE/CA's and RI/FSs. At this time it is not known if the removal action will be a final remedy. Additional remedial actions could be required based on the SI currently being conducted by IT. In addition, if at any time in the future there is an indication that a risidual OE hazard remains at the site, additional remedial alternatives may be required.

38/26/4.4 2nd sentence. What final report are you referring too?

**Response:** All site activities will generate a final report of some nature to provide documentation of findings, recommendations, procedures used, etc. Text has been revised to "final report(s)."

3rd sentence. Delete "consistent" and replace with "inconsistent'

39/26/4.5 1st sentence. Please define consistent.

Response: "To be in agreement with".

40/Appendix A Since the Army is conducting their OE removal/remedial actions according to CERCLA, and the NCP, it would seem prudent that you would reference, at minimum, CERCLA, the NCP, and the corresponding guidance documents such as "Conducting Non-Time Critical Removal Actions Under CERCLA". Please revise Appendix A.

**Response:** References have been added to Appendix A.

#### **End of Comments**

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 4



#### 61 Forsyth Street Atlanta, Georgia 30303-3104

04/27/00

Mr. Ron Levy
U.S. Army Garrison
BRAC Environmental Coordinator
Environmental Office
Building 215
15th Avenue
Fort McClellan, Alabama 36205-5000

RE:

- 1.) EPA Evaluation of revised EE/CA for M-2 Property,
- 2.) Clarification of the agreed upon schedule for the M-2 property

Dear Mr. Levy,

Attached are EPA comments on the revised EE/CA for the M-2 parcel. As you know these comments were to be discussed at our BCT meeting on 04/25-26/00 at Guntersville. Discussion of these comments did not occur. I gave a hard copy of these comments to the Corps of Engineers representative in attendance as an effort to expedite her review prior to re-writing the EE/CA document. This letter is a formal transmission of the same comments. These comments remain unresolved. Some comments may be on the same issue as are ADEM comments which were discussed during the above referenced meeting. There are some ADEM comments still outstanding, awaiting Army internal discussions and decisions.

Secondly, attached for your review is the Army supplied schedule of the M-2 property actions. Please notice that the Army supplied schedule clearly states that Site Specific work plans will be given to regulatory community. This did not happen. In lieu of site specific plans, the Army has supplied a Base Wide work plan for all OE/UXO actions. This document is considerably more comprehensive and therefore more time consuming to review and comment upon. EPA is still trying to work with the Army toward the goal of cleanup and transfer of the



M-2 property as specified in the schedule. EPA is committed to the goal of expeditious evaluation, cleanup and transfer and will do everything possible to meet the schedule. However, by broadening the document scope the Army has introduced yet another hurdle in the process.

Please advise me as soon as possible of the Army's intentions and envisioned process for reviewing these comments and re-writing the subject document.

Sincerely

**Bart Reedy** 

Attachments:

- 1.) EPA comments to second draft EE/CA
- 2.) Schedule for M-2 property

cc: P. Stroud, ADEM

# EPA Comments on the Revised Draft Engineering/Cost Analysis Report for the M2 Parcel Ft. McClellan Anniston, Alabama dated April 2000

#### **General Comments**

Before this EE/CA can be approved, it must be revised to address all of the EPA and Alabama Department of Environmental Managements comments made to date. In addition, the Action Memorandum (AM) for the M2 Parcel is presently under review. Since the AM is merely a short summary of what is presented in the EE/CA, the AM is null and void until it has been re-written to reflect changes made in modified EE/CA. Therefore, no comments will be offered on the AM at this time.

Response: After the EECA for the M2 Parcel has been finalized, the Action Memorandum will be revised if necessary to reflect any changes.

2. EPA's review of the Engineering Evaluation/Cost Analysis (Revised Draft) for the M2 Parcel dated April 2000 (EE/CA) identified that while this revised document provides more rationale and documentation than the original, this document still does not meet all relevant and applicable Federal, Department of Defense (DoD), Department of the Army (DA) or State guidance and policies. While responses to previous comments have been provided, and generally, the EE/CA has been revised to reflect incorporation of some of the comments, there are some responses to comments that are viewed as non-responsive. This review focused on the revised EE/CA based on the initial comments provided to the March 2000 draft EE/CA. Specifically:

This EE/CA is poorly written and does not contain adequate detailed data or rationale required to provide a defensible analysis of this action nor a full analysis of the alternatives. Specifically excluded are the performance objectives to support UXO/OE detection strategies. Stating that detectors will be used that can detect the items of interest at their depths without providing the analysis for a site-specific depth matrix, frost depth, land use depth matrix, UXO penetration analysis along with a current site-specific UXO penetration chart, is not defensible. Clearly, "Clearance to Depth" is not consistent with the DoD-EPA UXO Management Principles (March 7, 2000), DDESB 6055.9 Chapter 12 standards, DDESB Guidance for Clearance Plans (27 February 1998), nor the US Army Environmental Restoration Programs Guidance Manual (April 1998)(Complete references for all of the documents cited in these review comments are listed in Attachment 1 of this review report).

This EE/CA should provide a full discussion and analysis of the alternatives with

full rationale and data to support the conclusions of this action and how this action fits into the overall BRAC Cleanup Plan (BCP). Stating that "how this action fits into the overall cleanup" will be done when the BCP is updated is not defensible.

Regarding the term "No Department of Defense (DoD) Action Indicated", the author should provide the DoD authorization document for "No Department of Defense (DoD) Action Indicated." What has been provided is a Corps of Engineer document. In order for this to be considered even a Department of the Army (DA) document, much less a DoD document, there should be either a cover letter from DoD or DA with the appropriate authorization. As currently found this is only a COE authorization and should be stated as such.

Response: A site specific depth matrix has been added in section 2.6. How this fits into the BRAC cleanup plan has been added in E.1.3. The NDAI reference has been changed to "No Action."

While the EE/CA does not state that OeCert, GridStats was used, the way this document reads, it appears that this was the methodology that was used. If this is so, it should be so stated so that a proper evaluation can be made.

Response: Neither OE Cert or Grid stats were used for this EECA. Additional discussion on how data was generated has been added to Section 1.3 and 1.4 for clarification.

#### **Specific Comments**

Paragraphs E.1.1, E.1.2 and E.2.1. Regarding the statements (1) "The U.S. Army...to reduce the risk of exposure..."; (2) "M2 parcel-Training Area: This area... during other site investigations."; (3) "The purpose of the EE/CA..."; and "After a formal 30-day comment period, the Army will sign an Action Memorandum...", these paragraphs should be rewritten to reflect the correct citations below for the purpose and requirements of an EE/CA. Additionally, a short summary of the findings of "other site investigations" should be discussed as well as how the parcel fits into the overall cleanup process and the rationale for the priority of any recommended actions. The correct process flow of documents should also be followed; i.e. the AM comes after the EE/CA is approved (see Attachment 1) as well as who signs the AM.. The correct citations are:

US Army Environmental Restoration Programs Guidance Manual, April 1998, Chapter 1, paragraph 1.6.2.1 Removals. States: "Removal actions are intended to be relatively quick actions designed to address imminent threats to human health and the environment. The USEPA has categorized removal actions, as Emergency, Time-Critical, and Non-Time Critical. The action discussed in the EE/CA is a Non-Time Critical Action.

Non-Time Critical Removal Actions are those actions initiated in response to a release or threat of a release that poses a risk to human health, welfare, or the

environment. A Non-Time Critical Removal Action will begin with a removal site evaluation (40 CFR 300.410) which consists of the PA and, if warranted, a SI An Engineering Evaluation and Cost Analysis (EE/CA) is then conducted, considering all applicable Federal and state Applicable or Relevant and Appropriate Requirements (ARARs). Use of permanent solutions and alternative treatment technologies must be considered. The EE/CA must meet NEPA equivalency...". Attachment 2 to this review report contains excerpts from the COE guidance document which specifies the process to be followed for Non-Time Critical Removal Actions. This EE/CA should, but does not, follow this COE guidance document.

CEHND 1115-3-524, Removal Action Planning for Ordnance and Explosives Sites Procedural Document. Paragraph 7.1.4 Required Steps for Non-Time Critical Removal Actions, states "The NCP requires that a number of steps be performed as part of the Removal Action process." Additionally, paragraph 7.1.4.3 concerning EE/CAs states "The EE/CA completes any additional on-site data collection activities necessary to better define site conditions. It compiles all appropriate removal action alternatives and analyzes each for effectiveness, cost and ability to implement. It concludes with recommended Removal Actions or a determination of No Further Action (NOFA). An EE/CA must be completed for all Non-Time Critical Removal Actions as required by the NCP. The goals of the EE/CA are to identify the objectives of the Removal Action and to analyze the various alternatives that may be used to satisfy these objectives for effectiveness, implementability, and cost. ARARs must be identified and evaluated for their applicability to the proposed removal action throughout the EE/CA phase."

Response: An NTCRA process flow chart and an EE/CA process flow chart have been added to the executive summary.

2. Paragraph E.4.2. Regarding the statement "The M2 Parcel has been identified as part of a larger undocumented training area...the full extent of the training area has not been delineated...", a short summary of how this parcel was identified as part of a "larger undocumented training area" and how the parcel fits into this training area should be added.

Response: Additional clarification has been added.

3. <u>Paragraph E.4, Site History</u>. The Site History should be a summary of the M2 parcel versus Fort McClellan as a whole.

Response: Para. E.4.2 has been added to discuss site history of the M2 Parcel.

4. Paragraph E.5.1. Regarding the first bulleted item "No Department of Defense (DoD Action Indicated", the author should provide the DoD authorization document for "No Department of Defense (DoD) Action Indicated." What has been provided is a Corps of Engineer document. In order for this to be considered even a Department of the Army

(DA) document much less a DoD document there should be a cover letter from either the DoD or the DA with the appropriate authorization. As currently stated this is only a COE authorization and should be stated as such.

Response: "NDAI" has been revised to "No Action" in paragraph E.5.1 and in all other references throughout the document.

The second bulleted item is missing the dash between Alternative 2 and Land Use Controls.

Response: Text has been corrected.

The fifth bulleted item covers effectiveness. This bulleted item is divided into sub-bulleted items. The third sub-bullet covers Long-Term Effectiveness. Long-Term effectiveness also includes permanence and reduction of mobility. This should be addressed.

Response: These have been added.

The sixth bulleted item covers Implementability. This bulleted item is also subdivided into sub-bullets. The second sub-bullet addresses Administrative Feasibility. The author should provide the authorization document that addresses administrative feasibility as part of the nine evaluation criteria.

Response: EPA's guidance on Conducting EE/CA's.

Paragraph E.5.2, Analysis and Recommended Action. The first bulleted item states "Ensure protectiveness of the public and workers..." This statement is inconsistent with the rest of the EE/CA. The rest of the document only states "protectiveness of the workers." The site workers are covered under 29 CFR 1910.120 requirements and should not be addressed as part of the NTCRA. Additionally protection of the environment should also be addressed.

Response: This has been revised to simply state "public".

The third bulleted item states "Comply with ARARs to the extent practicable". The author should provide a complete definition of "practicable."

Response: This definition has been added in paragraph 2.2.

The fourth bulleted item states "Allow for the intended future use of the property." The author should state what the land use is at this point.

Response: Text has been revised to state that the intended reuse is commercial.

Additionally, each alternative should be fully analyzed using the nine criteria.

Response: A complete evaluation using the nine criteria has been added.

6. Paragraph E.5.3, Other Site Work. Regarding the statements "Prior to the removal...a site investigation...other environmental contamination.", the author should consider conducting any other SI work for "other constituents" either concurrent with any OE actions or after any actions have been completed at the parcel. This will eliminate the need to conduct "UXO avoidance" as part of that SI work.

Response: Field work for SI for other hazardous constituents within the M2 Parcel has been completed at this time.

7. Page 1, Section 1.1, Site Description. This section should be re-written to reflect the specifics of the M2 Parcel versus the overall site characteristics of Fort McClellan. The site characteristics must reflect the specifics of the M2 Parcel and how these characteristics affect the OE/UXO, such as frost depth, bed rock, erosional patterns, etc. These are critical elements for both a removal and long term monitoring of this parcel.

**Note** Paragraph 1.1.4, middle of Page 2. The sentence "The texture of the soil ranges from light clay loam." is not a complete sentence. It should be rewritten for clarity.

Response: Additional site characteristics have been added. Also text has been corrected in para. 1.1.4.

8. Page 2, Section 1.2, Site Background. This section should specify how it was determined that the M2 Parcel was determined to be part of a larger training area. Additionally, references should be made to the Archival Research documents or other citation from which the analyst made this determination (reference area of potential concerns (APOCs) screening criteria). Additionally, pictures of the parcel would be very helpful.

Response: Additional clarification has been added. Pictures of the M2 Parcel were not available, however, similar topography is shown in pictures included in the EE/CA for the Eastern Bypass.

9. Page 3, Section 1.3.4. Regarding the statement "There were anomalies identified in...", the author should fully develop this process and specify what the anomalies were (described from the referenced document). In addition, a table should be included which indicates what was considered an anomaly.

Response: Additional explanation has been added.

10. Page 4, Section 1.3.5. Regarding the statement "The purpose was to resolve anomalies....no evidence of ordnance impact areas..." (See Specific Comment 9 above), the author should fully described in the text what was indicated in the aerial photographs and the specific criteria and findings of the non-intrusive ground reconnaissance (versus site assessment). In addition, the author should explain whether "aerial identified anomalies" were verified with ground reconnaissance. Additionally, a picture, if available, would be most helpful.

Response: Additional explanation has been added.

Page 4, Section 1.3.6. The last sentence states "Refer to Appendix C for the geophysical results..." This reference, which is incorrect, should be changed to Appendix F. Appendix C is Figures of OE items.

Response: Text has been corrected.

12. Page 5, Sections 1.4, Source and Nature of Contamination and 1.4.1, M2 Parcel-Training Area. This section should contain the Site Conceptual Model showing the primary release mechanisms, secondary release mechanisms and the exposure pathways. Also, see General Comment 2.

Response: A site conceptual model has been added.

13. Page 6, Table 1.1, Potential OE at M2 Parcel. This table should also contain the type and amounts of explosive chemicals associated with a particular ordnance item as well as the site specific depth at which the item was found.

Response: amounts of explosive chemicals are in Table 1.1 and penetration depths of the items have been added. Figure 4 shows the locations of the items found as well as depths at which they were found.

Page 7, Section 1.5. The second sentence states "Results of the risk analysis are presented in Appendix B." This reference is incorrect and should be changed to Appendix D. Appendix B is Glossary of Terms.

The following statements are unacceptable.

"The risk assessment identifies the primary hazards associated with the M2 Parcel...risk of an unsuspecting individual encountering OE on the surface."

"Any residual risk would be to site workers..."

"The risk assessment shows that this residual risk can easily be managed...Land Use Controls..."

"Implementation of a removal action in conjunction with the proposed Land Use Controls will result in the property being safe for the intended land use.

This entire section needs to be re-written to reflect the comments made on Appendix D. Response: This entire section has been rewritten.

15. Pages 8-9, Section 2.3.2, Removal Action, Second Paragraph 2, Bullets 1 and 2. The indicated changes should be made to these two bulleted items.

"Provide a clear preference to blow-in-place..."- This conflicts with paragraph 3.2.4. If an item is determined to be safe to move, the item should be moved to a central area for disposal options. There are well defined procedures within COE for this methodology.

Response: Text has been deleted.

"Use appropriate disposal techniques for OE related scrap..."- The author should cite DoD 4160.21&M as the requirements for this particular activity.

Response: Reference has been added.

Page 9, Section 2.5. Regarding the response to the initial comment whether DoD 6055.9 16. is an ARAR versus TBC, the author not concur with the response statement that DoD 6055.9 as being an ARAR and cities Code of Federal Regulations 300.5. The response only partially addresses the issue, Chapter 12 still "specifically addresses remediation, remediation methods and use restrictions, remediation planning, remediation process, site specific depth determination and assessment depth." DOD 6055.9-STD is a promulgated standard (32 CFR Part 186) and mandatory for use by all DOD Components (DDESB 1997). Therefore DOD 6055.9-STD is elevated to the status of an ARAR rather than a TBC criteria. TBC criteria only address non-promulgated guidance. DDESB (1998) should also be added as a TBC, since it includes guidance to implement clearance plans in DOD 6055.9-STD, Chapter 12, as well as, the DoD/EPA UXO Policy Guidance (2000). Additionally, Section 7.1.4.7 (OASA(I,L&E) letter, 1 November 1993) provided "OEW Design Considerations." Although OEW can contain chemical compounds that are hazardous, the primary danger of OEW results from its inherent design to cause death or injury to personnel, or damage and destruction to property. Ordnance safety is a primary consideration when designing and implementing an OEW Response Action. ".

All conventional explosive ordnance, whether it remains usable or has been designated as waste, will be managed in accordance with DoD 6055.9-STD, DoD Ammunition and Explosive Safety Standards. Conventional explosive ordnance operations involving hazardous waste must also be managed in accordance with the applicable Resource Conservation and Recovery Act (RCRA) requirements. To the extent that any RCRA requirements conflict with the DOD Ammunition and Explosive Safety Standards, the responsible individual must notify the appropriate regulatory agency and, if necessary, expeditiously elevate any disputes through the chain of command for resolution. In resolving such conflicts, prevention of injury and protection of life will be the primary concern of the DA decision maker.

Response: Text has been revised in E. .2 and also in Para 2.5.5 and 2.5.6.

7. Page 11, Section 2.5.9, To Be Considered Criteria. See Specific Comment 16, above.

Response: See response to Comment #17

18. Page 11, Section 2.6. Intended Land Use. his section should include a site specific depth to land use matrix.

Response: Depth to land use matrix has been added.

Page 12, Section 3. The evaluation criteria needs to reflect the correct EPA nine evaluation criteria versus criteria such as "Administrative Feasibility", and "Availability of Services and Materials" to name two found in this section.

Response: This section has been rewritten to reflect a detailed analysis using the nine criteria.

20. Page 12, Section 3.2.1. The fourth sentence states "Specific Land Use Controls that are appropriate for the M2 Parcel are education of site workers in hazards associated with OE..." What is stated in this sentence for LUCs with respect to site workers is actually a requirement under 29 CFR 1910.120, Site Specific Training Requirements. This needs to be re-written to reflect actions for both the public and the site workers.

Response: Text has been revised to "construction workers".

21. Page 13, Section 3.2.4. This section conflicts with Section 2.3.2 (See Specific Comment 15 above).

Response: Text has been revised.

22. Page 15-16, Section 3.3.4. "OE to Dept with LUCs." should be changed to "...Depth... This section should clearly define the types and amounts of expected OE from a valid SCM. Also see General Comments 1, first bullet above. Additionally, since there has been no site specific geophysical proveout, the bullets on "mag & flag" and "digital geophysical mapping" are not validated. Also, see Specific Comment 23 below. Response: Text has been corrected. Also see response to comment #23.

23. Page 16, Paragraphs 3.3.5. Hand-held Magnetometers and 3.3.6, Digital Geophysical Mapping. These sections need to be re-written. These sections should provide specific instruments and processes that will be used on the M2 Parcel. These instruments and processes should have already been identified in an analysis of technologies that are currently available and verified for on site use in a geophysical proveout.

Response: This is intended as a general discussion on technologies that may be appropriate. Since the work will be conducted under a performance based contract, the contractor may propose any instrument that he can demonstrate is effective. This contractor has currently "proven" that an EM61 and USRADS 2300 using proprietary software is extremely effective. However, if he proposes a different technology he will have to "prove" it also.

24. Page 23, Section 4.2. The fourth sentence: "Following the screening of the alternatives, this was the only remaining.....allowing transfer of the property for commercial use without restriction." is an incorrect statement and needs to properly reflect that if the removal is conducted as currently espoused that there will be, as a minimum of deed restrictions, education and construction support requirements for any excavations, as well as "dig permits."

Response: Text has been revised.

Page 23, Paragraph 4.2, Next to Last Sentence. "The cost estimates prepared for the removal action are based on clearance of the areas indicated in Table 3.1. This table is titled "Analysis and Screening of Removal Action Alternatives". It does not address the M2 area of action. Instead, it contains estimates of ordnance density from adjacent areas

- versus any investigation/characterization of the M2 Parcel. Additionally, the cost estimates do not include costing for "investigation" as indicated in paragraph 3.3.5. Response: Table reference has been corrected. Also "investigation" has been revised to "removal action".
- 26. Pages 23-24, Paragraph 4.3, Risk Management. This section needs to be re-written to reflect a risk management program for the M2 parcel that also ties into the overall site risk management plan and long term monitoring plan. A subsection of all these plans is an "Institutional Control Management Plan" which contains land use controls.
- Response: Fort McClellan has developed a Land Use Control Action Plan that was developed in conjunction with the State and EPA on how Land Use controls will be implemented and managed. This plan requires that a LUCIP (Land Use Control Implementation Plan) will be developed for each site requiring land use controls.
- 27. Pages D-1- D-4, Appendix D, Risk Management. (See Specific Comment 26.). This appendix needs to be re-written. This document does not contain an appropriate analysis of the data to support the recommended action nor does it provide a validated "risk management" analysis from a plan that has been concurred with by the regulatory agencies. For example, this appendix identifies "Behavior Modification." This term is not one found within any DoD or DA risk management document. This term is an inaccurate and repulsive term that only addresses the portion of the population that "follows the rules". This concept specifically excludes those adults that either do not understand or believe the provided information and young adults and children who may not be capable of understanding the results of their actions. Informing the public is a duty; modifying behavior in a free society is an inaccurate representation of the effect of informing the public. The individual chooses the appropriate behavior based on their belief and understanding of the information provided and their understanding of the consequences of their actions. Additionally, the author should explain how it was concluded that a "low density of OE" (Section D2.5) consists of "100 to 200 subsurface anomalies per acre" with approximately "10-20" being OE. An explanation should be provided as to what validated methodology and sampling program was conducted to produce these numbers. Additionally, it should be stated whether the geophysical prove out provides the validated Probability of Detection and Confidence Level, False Alarms Rates with sufficient locational accuracy to support these numbers.

Response: The discussion of risk has been deleted from this section and rewritten and placed in Section 1.5

29. Page F-1, Appendix F, Geophysical Data for Area 6. This appendix needs to be rewritten. While the maps are pretty there is no analysis nor documentation of how Area 6 fits into the M2 Parcel. There should also be all the pre-and post processed data with dig sheets and the full analysis including Pd, Cl and FAR also be included.

Response: This is a report that was developed for the Eastern Bypass EE/CA. Although additional detail has been added to section 1.3 on this data, the reviewer should refer to the referenced document for complete detail.

#### Attachment 1

#### References:

#### DoD-EPA UXO Management Principles, March 7, 2000

- 2. EPA Guidance for the Data Quality Assessment Process (QA/G-9) (EPA 1997)
- 3. EPA540-R-93-057 / PB93-963404 Guidance on Conduction Non-Time-Critical Removal Actions Under CERCLA (August 1993)
- 4. Fact Sheet Expediting BRAC Cleanups Using CERCLA Removal Authority (Spring 1997)
- 5. DoD 6055.9 STD (w/chg 1) DOD Ammunition and Explosives Safety Standards (July 1996)
- 6. DDESB memorandum Guidance for Clearance Plans, 27 February 1998
- 7 TB 700-2 Department of Defense Ammunition and Explosives Hazard Classification Procedures (5 January 1998)
- 8. AR 385-64, U.S. Army Explosive Safety Program.
- 9. Department of the Army Pamphlet 385-64, Ammunition and Explosives Safety Standards.
- 10. US ARMY ENVIRONMENTAL RESTORATION PROGRAMS GUIDANCE MANUAL, April 1998
- 11. CEHND 1115-3-524, Removal Action Planning for Ordnance and Explosives Sites Procedural Document.
- 12. General Site-Wide Work Plan for Ordnance and Explosives Response at Fort McClellan, Alabama (Draft) (15 March 2000)

#### Attachment 2

CEHND 1115-3-524, Removal Action Planning for Ordnance and Explosives Sites Procedural Document. Paragraph 7.1.4 Required Steps for Non-Time Critical Removal Actions states "The NCP requires that a number of steps be performed as part of the Removal Action process. Non-Time Critical Removal Actions (where more than 6 months planning time is available) require the largest number of formal steps, and the most community involvement prior to project implementation. The required steps are summarized below,..., and seen in Figure 1.

THE NON-TIME CRITICAL REMOVAL ACTION PROCESS
Removal Site Evaluation
EE/CA Approval Memorandum
EE/CA
30-Day Public Notice
EE/CA Action Memorandum
Removal Action Design
Removal Action Implementation
Removal Action Close-out
Post-Removal Site Control (If OEW remains)

#### 7.1.4.1 Removal Site Evaluation.

Section 300.410 of the NCP outlines the process for conducting an assessment, which includes a Preliminary Assessment (PA) and, if warranted, a Site Inspection (SI). The PA is based on readily available information. It identifies the source and nature of the release or threatened release and assesses the threat to public health, the magnitude of the threat, and the factors necessary to determine the need for a removal action. The PA also determines if more information is needed to characterize the release, such as off-site or on-site inspection of conditions, and sampling. If more information is necessary, a SI is performed. The PA/SI helps the OSC/RPM determine the need for response, if any, and the urgency of the response. At active DoD installations, the PA/SI equivalent documentation is typically reviewed and approved by the Army Environmental Center and the project implementation responsibility is delegated to the appropriate USACE district.

#### 7. .4.3 EE/CA.

The EE/CA completes any additional on-site data collection activities necessary to better define site conditions. It compiles all appropriate removal action alternatives and analyzes each for effectiveness, cost and ability to implement. It concludes with recommended Removal Actions or a determination of No Further Action (NOFA). An EE/CA must be completed for all Non-Time Critical Removal Actions as required by the NCP. If the EE/CA cannot be completed in 1 year, an Remedial Investigation/Feasibility Study shall be performed. The goals of the EE/CA are to identify the objectives of the Removal Action and to analyze the various alternatives that may be used to satisfy these objectives for effectiveness, implementability, and

cost. ARARs must be identified and evaluated for their applicability to the proposed removal action throughout the EE/CA phase. While an EE/CA is similar to the RI/FS conducted for Remedial Actions, it is less comprehensive. The EE/CA should be prepared using the following format. The EPA Document, "Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA" provides detailed guidance in addressing the individual topics. The EE/CA may be prepared by either the local USACE district or by USAEDH.

#### EE/CA OUTLINE

Executive Summary
Site Characterization
Site Description and Background
Previous Removal Actions
Source, Nature, and Extent of Contamination
Analytical Data
Streamlined Risk Evaluation
Identification of Removal Action Objectives
Statutory Limits on Removal Actions
Determination of Removal Scope
Determination of Removal Schedule
Planned Remedial Activities
Identification and Analysis of Removal Action

#### Alternatives

- Effectiveness
- Implementability
- Cost

Comparative Analysis of Removal Action Alternatives Recommended Removal Action Alternative

#### Schedule for M2 Parcel Site Investigation and Removal Action

#### Assumptions:

- \_ All parties involved will agree to meet short turn around review periods
- \_ IT Group will complete SI field work by 15 May

Feb 23 – Mar 10 SI Work plan preparation (IT Group)	
Feb 24 - Mar 18	EECA preparation (CEHNC)
Mar 11-21	SI Work plan review and comment resolution (FMC, Mobile, regulators)
Mar 20-31	EECA review period (FMC, Mobile, regulators)
Mar 22 – Apr 28	SI Field work (IT Group)
Mar 31	EECA comments due to CEHNC (FMC, Mobile, regulators)
Apr 3–22	Develop Explosive Safety Submission/Site Specific Work Plans (Foster Wheeler)
Apr 3-4	EECA comments incorporated (CEHNC)
Apr 5-7	Backcheck EECA comments (FMC, Mobile, regulators)
Apr 10-16	Action Memorandum preparation for EECA (CEHNC)
Apr 17-28	Action Memorandum review period for EECA (FMC, Mobile, regulators)
Apr 10 - May 9	Public Review of EECA
Apr 24 - May 5	ESS/WP review (FMC, Mobile, regulators)
Apr 29 – May 31	SI sample analysis, data validation and SI Draft Report preparation (IT Group)
May 2–17	FOST preparation (IT Group, FMC)
May 10	Public Meeting for EECA
May 11-12	
May 12	Incorporation of Public comments into EECA (CEHNC)
<del>-</del>	Sign Action Memorandum for EECA (FMC, Mobile, regulators)
May 5	ESS/WP comments due to CEHNC (FMC, Mobile, regulators)
May 8-9	Comments on ESS/WP incorporated (Foster Wheeler)
May 10-12	Backcheck ESS/WP comments (FMC, Mobile, regulators)
May 15-Jun 14	DDESB review of ESS (DDESB)
May 15-Jun 17	Brush clearing and geophysical mapping on M2 Parcel (Foster Wheeler)
Jun 1-20	SI Report review and comment resolution (FMC, Mobile, regulators)
Jun 14	DDESB approval
Jun 19-30	Removal Action of UXO on M2 Parcel (Foster Wheeler)
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Jul 3-15	Removal Report (Foster Wheeler)
Jul 7	Final SI Report (IT Group)
Jul 17-22	Removal Report review (CEHNC)
Jul 24 - Aug 22	Removal Report review (FMC, Mobile, regulators, DDESB)
Jul 25-27	Incorporate UXO information into FOST (IT Group)
Jul 28-Aug 14	FOST review period and BDSP preparation
Aug 23 25	Community on David I.D. and a second of the
Aug 23-25	Comments on Removal Report incorporated (Foster Wheeler)
Aug 28-Sep	Backcheck Removal Report comments (FMC, Mobile, regulators, DDESB)
Aug 14-16	Comments on FOST incorporated/resolved (IT Group, FMC)
Aug 17	Final FOST and BDSP to TRADOC
Sep 8	Final Removal Report (Foster Wheeler)
-	

#### Questions on EECA for M2

#### From Barry Cox

#### E.5.2 page E-3

"Comply with ARARs to the extent practicable"

(1.) Who decides the extent practicable?

#### E.5.2 page E-4

"Post removal action risk management activities and long-term monitoring may be required."

(2.) Who pays for monitoring?

#### 1.4.1 page 5

"Through erosion and accumulation of organic material over the site, all OE is anticipated to be encountered at depths of less than one foot unless disposed of in a burial pit."

#### D.2.4 page D-2

"Ordnance Distribution. All previous investigations in and around the M2 Parcel indicate it was used for training with OE practice items and training aids. Any OE or ordnance related scrap that resulted from this activity would be expected to be located primarily on the ground surface or within the upper 2 feet of subsurface. This distribution of the OE increases the risk of individuals encountering OE."

(3.) Why does 1.4.1 (page 5) use a depth of one (1) foot while D.2.4 (page D-2) uses a depth of two (2) feet?

#### 1.5 page 7

"Implementation of a removal action in conjunction with the proposed Land Use Controls will result in the property being safe for the intended land use."

(4.) Why is the word "safe" used in the context of risk management?

#### 2.1 page 8

"The objectives must be able to meet the requirements set forth in the applicable or relevant and appropriate requirements (ARARs), while still being realistic and achievable in terms of cost."

(5.) Who decides what is realistic and achievable in terms of cost?

#### 2.3.2 page 9

"The intent of this project is to locate, recover, and dispose of all surface and subsurface OE within the M2 Parcel."

"In the event that actual removal of OE is required"

(6.) Please explain the inconsistencies on page 9.

#### 2.5.2 page 10

"Three factors are applied to determine whether identifying and attaining ARARs is practical in a particular response situation. These factors include:

- the exigencies of the situation;
- the scope of the response action to be taken"
- (7.) Why are only two (2) factors listed?

#### E.5.1 pages E-2 and E-3

"The alternatives considered by the Army in the EE/CA are:

- ❖ Alternative 1 No Department of Defense (DoD) Action Indicated
- ❖ Alternative 2 Land Use Controls
- ❖ Alternative 3 Construction Support
- ❖ Alternative 4 Surface and Subsurface Clearance to Depth with Land Use Controls" E.5.2 page E-4

"Alternate 2 would be effective, implementable and cost effective. However, it is believed that it would meet with public resistance as a stand-alone remedy because it would prohibit development of the property."

#### 2.6 page 11

"The M2 Parcel will be transferred to the Anniston-Calhoun County Fort McClellan Development Joint Powers Authority for commercial development."

(8.) The document states that four (4) alternatives were considered. Please note that one of these alternatives prohibits development of the property. The document also states, "The M2 Parcel will be transferred to the Anniston-Calhoun County Fort McClellan Development Joint Powers Authority for commercial development." Please explain this discrepancy.

## Responses to comments from Mr. Barry Cox on M2 Parcel EE/CA

- E.5.2, page E-3 Response: Discussion on what is meant by practicable has been added to section 2.2.
- **E.5.2**, page **E-4** Response: The Army is responsible for conducting reoccurring reviews to ensure the removal action was effective and that site conditions haven't changed in such a way that another remedial action is required.
- 1.4.1 page 5 and D. 2.4 page D-2 Response: There are two ways OE items may occur in the M2 Parcel. The first way is through standard use in training where items were distributed by throwing, firing, or placing them for their intended use. The maximum penetration depth of any of the potential items within the M2 parcel when used as intended is 10 inches. However, when training was completed, sometimes the unused training items that remained were buried within the area where the training exercise occurred. These burials were generally done by hand with less than 2 feet of fill covering the burial and multiple items within it making them easily detectable. More detail has been added to section 1.4 to clarify this. also a site specific depth matrix has been added to section 2.6.
- **1.5 page 7 Response:** The risk associated with OE is from fire and explosion which are physical safety hazards. Safety is the foremost consideration for all OE response actions. Although it may be possible to remove all OE safety hazards from the site through the physical clearance, Land Use Controls are proposed as another safety precaution.
- **2.1 page 8 Response:** Although the Army initially evaluates the cost as part of the recommended alternatives, this is a subjective evaluation and public and regulatory opinion often alters this initial evaluation.
- **2.3.2 page 9 Response:** The term "required" has been changed to "identified" for clarity. It is the intent to remove all OE that is found in the M2 Parcel.
- **2.5.2 page 10 Response:** This statement has been corrected. "Two factors" is the correct text.
- **E.5.1** pages E-2 and E-3, E.5.2 page E-4, 2.6, page 11 Response: Land Use Controls as a stand alone remedy was used in the initial screening of all alternatives. This was in the event that all other alternatives resulted in being unfeasible to clean up the property to make it suitable for transfer for commercial development; at a minimum, Land Use Controls would be required to protect the

public from possible hazards on the M2 Parcel, even if the property was not transferred or transferred for a different use. However, initial screening of the alternatives resulted in other alternatives being feasible to allow for the intended land use, so the Land Use Controls alternative was dropped from further consideration as a stand alone alternative. Section 3 has been revised to show the detailed screening and evaluation factors used for each alternative.



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### **REGION 4**

#### 61 FORSYTH STREET ATLANTA, GEORGIA 30303-8960

June 01, 2000

Mr Ron Levy
BRAC Environmental Coordinator
U.S. Army Garrison
Environmental Office
Building 215
15th Street
Fort McClellan, Alabama 36205-5000

RE: M-2 Parcel, Explosives Safety Submission, dated 22 April 2000

Dear Mr. Levy,

I have reviewed the Latest Draft submission of the Engineering Evaluation and Cost Analysis for the M-2 property. Explosive Safety Submission for the M-2 parcel As a result of that review I have the following comments to offer. Please address the comments as soon as practicable.

Thank you for the opportunity to review this document.

Sincerely,

**Bart Reedy** 

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## EPA comments on the Draft Engineering Evaluation/Cost Analysis Report for the M2 Parcel, May 2000 Ft. McClellan Anniston, Alabama

#### **General Comments**

EPA's review of the Final Draft Engineering Evaluation/Cost Analysis for the M2 Parcel dated May 2000 identified that while this revised document provides more rationale and documentation than the original, this document still does not meet all relevant and applicable Federal, Department of Defense (DoD), Department of the Army (DA), or State guidance and policy. This review focused on the revised document based upon the initial comments provided on the March 2000 draft EE/CA (the references cited are attached to the end of this review report).

Compliance with Federal regulations (particularly the National Contingency Plan (NCP), specifically Reference 18, Department of Defense (DoD) References 1-6, Department of Army (DoA) References 7-17, and State requirements (non identified as required by the NCP, and Reference 13), focusing on EE/CA requirements and explosive safety pursuant with the following:

Adequacy of the proposed UXO clearance operations and QA/QC for UXO clearance operations;

Adequacy of the UXO geophysical methodology for determining the presence or absence of unexploded ordnance; and

Adequacy of data quality objectives (DQOs) and analysis of the alternatives to support the removal approach and the critical data elements to support the proposed remedy selection pursuant to the National Contingency Plan.

#### **Specific Comments.**

Page E-7, Section E.5.2. Analysis and Recommended Action. Subparagraph 3 states "LUCs [Land Use Controls] in the form of education of construction workers and property owners on the potential OE hazards that may be associated with the property and identification of proper notifications to take if any OE is encountered". Subparagraph 4 states "Although it is anticipated that the removal action may serve as the final remedy for this site, there is no assurance that it will be 100% effective. In the event that residual OE is determined to remain on the site, post removal action risk management activities and long-term monitoring may be required." The author should change the statement in Subparagraph 3 to read "Any land use controls will be delineated in a Land Use Control Implementation Plan (LUCIP). LUCs in the form of site specific OE education and handouts may be part of these land use controls". The author should change the

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statement in Subparagraph 4 to read "Post removal review will take place upon completion of the removal action to verify the completeness of the clearance. Decisions on a suitability for transfer will be based upon this review and any other removal actions adjacent to this parcel".

Response: Requested change has been incorporated.

2. <u>Page 9, Section 1.5.1.1</u>. After the seventh sentence, the author should add "The proposed land use receptor would be an office worker. However, with the proposed construction of an office building this would be limited to the initial construction workers, only".

Response: Requested change has been incorporated.

3. Page 13, Section 2.5, Applicable or Relevant and Appropriate Requirements. At the start of this section, the author should add the write up from section E.1.2.

Response: Requested change has been incorporated.

4. Page 17, Table 2.1 Site-Specific Depth to Land Use Matrix. The author should add a note to the bottom of this table stating "Detectors capable of detecting ordnance at a depth greater than the expected ordnance penetration depth will be used and verified by QA/QC."

Response: Requested change has been incorporated.

5. Page 19, Section 3.2.1. The author should change the term "NDAI" in the first sentence to "NFA".

Response: Requested change has been incorporated.

6. Page 22, Section 3.3.4. The author should change the term "Dept" in the title to "Depth." Additionally, the author should insert in this section, the recommended sentences found in Specific Comment 1 above.

Response: Requested change has been incorporated.

#### **References:**

- 1. Memorandum DoD/EPA *Unexploded Ordnance (UXO) Management Principles* dated 7 March 2000.
- DoD 6055.9-STD DoD Ammunition and Explosives Safety Standards July 1999, authorized by DoD Directive 6055.9 DoD Explosives Safety Board (DDESB) and DoD Component Explosives Safety Responsibilities July 29, 1996
- 3. Memorandum (DDESB-KO) Guidance for Clearance Plans dated 27 February 1998
- 4. Department of Defense (DoD) Directive number 4715.11 Environmental and Explosives Safety Management on DoD Active and Inactive Ranges within the United States 17 August 1999
- 5. Technical Bulletin (TB) 700-2 Department of Defense Ammunition and Explosives Hazard Classification Procedures 5 January 1998
- 6. DoD Manual 4160.21-M *Defense Reutilization and Marketing Manual* 18 August 1997, authorized by DoD Directive 4140.1 *Material Management Policy* 4 January 1993
- 7. Memorandum for US Army Technical Center for Explosives Safety. Subject" To assist in the implementation of Chapter 12, DoD 6055.9. Dated 27 Feb 98.
- 8. Army Regulation (AR) 385-64, *U.S. Army Explosive Safety Program* 28 November 1998
- 9. Department of the Army Pamphlet (DAP) 385-64, Ammunition and Explosives Safety Standards 28 November 1998
- 10. US Army Environmental Restoration Programs Guidance Manual, April 1998
- 11. HQDA Letter 385-98-1 DACS-SF (3 October 1997) Explosives Safety Policy for Real Property Containing Conventional Ordnance and Explosives 30 June 1998 note expires 30 June 2000
- 12. AR 385-15, Safety Preparation of Standard Operating Procedures for Hazardous Operations
- 13. AR 350-4, Training and Certification Program for Personnel Working in Ammunition Operations
- 14. CEHND 1115-3-524, Removal Action Planning for Ordnance and Explosives Sites

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- Procedural Document. Note superceded by 1110-1-18 24 Apr 00
- 15. Engineer Pamphlet (CEMP-RT) 1110-1-18 Engineering and Design Ordnance and Explosives Response 24 April 2000
- 16. CEHNC-OE-CX Procedures for Demolition of Multiple Rounds (Consolidated Shots) on Ordnance and Explosives (OE) Sites August 1998 with terminology update March 2000
- 7. CEHNC-OE-CX Basic Safety Concepts and Consideration for Ordnance and Explosives (OE) Operations, OE Center of Expertise (CX) Interim Guidance Document 00-02 7 March 2000
- 18. EPA's Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA (EPA/540-R-93-057, August 1993)
- 19. EPA Guidance for the Data Quality Assessment Process (QA/G-9) (EPA 1997)
- 20. Final Engineering Evaluation/Cost Analysis Report for the M2 Parcel Fort McClellan, Alabama dated May 2000
- General Site-Wide Work Plan for Ordnance and Explosives Response at Fort McClellan, Alabama (Draft) (15 March 2000)